

1 **Amendment to the Claims**

2 **In the Claims:**

3 Please cancel Claims 57-61 without prejudice, subject to applicants' right to file a divisional
4 patent application directed to these claims during the pendency of the present application.

5 Please amend Claims 4, 12, 14, 21, 24, 27, and 35 as follows:

6 1. (Original) A method for determining one or more performance metrics for a
7 distributed application in which distributed application data are transferred from a first site to a
8 second site over a network, comprising the steps of:

9 (a) enabling a user to transmit a request for the distributed application data desired
10 by the user, said request being transmitted from the second site to the first site over the network;

11 (b) in response to the request, transmitting the distributed application data from the
12 first site to the second site over the network, if the distributed application data are not already
13 accessible at the second site;

14 (c) including machine instructions that define a performance monitoring function
15 with the distributed application data that were requested and transmitted over the network to the
16 second site; and

17 (d) executing the machine instructions at the second site, to implement the
18 performance monitoring function and to determine the one or more performance metrics for the
19 distributed application without using the performance monitoring function to request any distributed
20 application data from any other site.

21 2. (Original) The method of Claim 1, wherein the performance monitoring function at the
22 second site is initiated after the distributed application data are accessed at the second site.

23 3. (Original) The method of Claim 1, further comprising the step of collecting the one or
24 more performance metrics for the distributed application over the network.

25 4. (Currently Amended) The method of ~~Claim 1~~ Claim 3, wherein the step of collecting the
26 performance metrics includes the step of applying a probabilistic sampling parameter to determine
27 whether performance metrics are collected from each of a plurality of sites.

28 5. (Original) The method of Claim 4, wherein the probabilistic sampling parameter is applied
29 on a per-site basis.
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1 6. (Original) The method of Claim 4, wherein the probabilistic sampling parameter is applied
2 on a per-request basis.

3 7. (Original) The method of Claim 1, wherein the performance monitoring function at the
4 second site determines one or more of:

5 (a) a fetch latency, corresponding to a time period required to fetch the distributed
6 application data from the first site over the network;

7 (b) a render latency, corresponding to a time period required to fetch and display
8 the distributed application data at the second site;

9 (c) a dwell latency, corresponding to a time period exhibited by a user requesting
10 the distributed application data, before requesting other distributed application data;

11 (d) a per-image fetch latency, corresponding to a time period for fetching a
12 specific image referenced in the distributed application data;

13 (e) an image arrival time, corresponding to a time at which a specific image,
14 loaded as a part of accessing the distribution application data, arrives at the second site;

15 (f) a navigation status, corresponding to an event that brought a user to the
16 distributed application data;

17 (g) a cache status, corresponding to a determination of whether the distributed
18 application data was cached at the second site;

19 (h) a window resize event, corresponding to a determination of whether the user
20 resized a window in which the distributed application data are accessed;

21 (i) a page stop event, corresponding to a determination of whether the user
22 aborted loading the distributed application data;

23 (j) an image error event, corresponding to a determination of whether an error
24 occurred while loading an image referenced in the distributed application data; and

25 (k) a JavaScript error event, corresponding to a determination of whether an error
26 occurred during interpretation of JavaScript included in the distributed application data.

27 8. The method of Claim 3, further comprising the step of determining whether to collect
28 a performance metric from the second site as a function of a specific performance metric that was
29 determined at the second site.
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1 9. (Original) The method of Claim 1, further comprising the step of determining whether the
2 distributed application data are already cached at the second site or must be transferred from the first
3 site, before determining a performance metric.

4 10. (Original) The method of Claim 1, wherein the distributed application data have a
5 markup language format.

6 11. (Original) The method of Claim 1, further comprising the steps of determining a
7 performance metric at the first site; and combining the performance metric determined at the second
8 site with a performance metric determined at the first site to determine a correlated performance
9 metric.

10 12. (Currently Amended) The method of Claim 1, wherein said one or more performance
11 metrics is determined ~~substantially~~ without any apparent ~~affect~~ effect on the access of the distributed
12 application data at the second site.

13 13. (Original) A machine-readable medium on which are stored machine instructions for
14 inclusion with distributed application data that are transferred from one site to another, said machine
15 instructions causing:

16 (a) a performance monitoring function to be implemented when the distributed
17 application data are accessed; and

18 (b) the performance monitoring function to determine one or more performance
19 metrics for a distributed application in which the distributed application data are transferred between
20 sites and accessed at one of the sites, without using the performance monitoring function to request
21 any distributed application data from any other site.

22 14. (Currently Amended) A system for determining one or more performance metrics for a
23 distributed application in which distributed application data are transferred from a first site to a
24 second site over a network, comprising:

25 (a) a memory;

26 (b) a display;

27 (c) a network interface; and

28 (d) a processing device that is coupled to the memory, the display, and the network
29 interface, said network interface being adapted to enable communication over the network, wherein at
30 the second site, the processing device causes a request for the distributed application data to be

1 transmitted over the network through the network interface to the first site, said processing device at
2 the ~~second~~ first site responding by transmitting the distributed application data along with machine
3 instructions that cause the processing device at the second site to perform a performance monitoring
4 function when executed by said processing device as the distributed application data are accessed at
5 the second site, said performance monitoring function determining said at least one performance
6 metric and being implemented without requiring any affirmative action by a user of the processing
7 device and without using the performance monitoring function to request any distributed application
8 data from any other site.

9 15. (Original) The system of Claim 14, wherein the machine instructions cause the
10 processing device at the second site to transmit said at least one performance metric over the network
11 to a data center serving as a collection site for performance metrics.

12 16. (Original) The system of Claim 15, wherein a probabilistic sampling parameter is applied
13 to determine whether the performance metric is collected at the data center.

14 17. (Original) The system of Claim 16, wherein the probabilistic sampling parameter is
15 applied on a per-site basis.

16 18. (Original) The system of Claim 16, wherein the probabilistic sampling parameter is
17 applied on a per-request basis.

18 19. (Original) The system of Claim 14, wherein the machine instructions executed by the
19 processing device at the second site cause a determination of one or more of:

20 (a) a fetch latency, corresponding to a time period required to fetch the distributed
21 application data from the first site over the network;

22 (b) a render latency, corresponding to a time period required to fetch and render all
23 contents of the distributed application data on the display at the second site;

24 (c) a dwell latency, corresponding to a time period exhibited by a user requesting
25 the distributed application data, before requesting other distributed application data;

26 (d) a per-image fetch latency, corresponding to a time period for fetching a
27 specific image referenced in the distributed application data;

28 (e) an image arrival time, corresponding to a time at which a specific image,
29 loaded as a part of accessing the distribution application data, arrives at the second site;
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1 (f) a navigation status, corresponding to an event that brought a user to the
2 distributed application data;

3 (g) a cache status, corresponding to a determination of whether the distributed
4 application data was already cached in the memory at the second site;

5 (h) a window resize event, corresponding to a determination of whether the user
6 resized a window in which the distributed application data accessed are rendered on the display at the
7 second site;

8 (i) a page stop event, corresponding to a determination of whether the user
9 aborted loading the distributed application data from the first site;

10 (j) an image error event, corresponding to a determination of whether an error
11 occurred while loading an image referenced in the distributed application data; and

12 (k) a JavaScript error event, corresponding to a determination of whether an error
13 occurred during interpretation of JavaScript included in the distributed application data.

14 20. (Original) The system of Claim 14, wherein the machine instructions cause the
15 processing device at the second site to determine whether the distributed application data are cached
16 at the second site or must be transferred from the first site, before determining said one or more
17 performance metrics.

18 21. (Currently Amended) A method for determining and collecting at least one performance
19 metric related to access of a Web page by a browser program on a client device, including at least one
20 of a compound performance metric and a correlated performance for a network, comprising the steps
21 of:

22 (a) enabling a user to request transfer of the Web page from a server device to the
23 client device over a network;

24 (b) including machine instructions with the Web page when the Web page is
25 transferred to the client device;

26 (c) when the Web page is loaded by the client device for rendering by the browser
27 program, causing the client device to execute the machine instructions to carryout a browser
28 monitoring function, said browser monitoring function being implemented without requiring any
29 affirmative action by a user of the client device;

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1 (d) determining said at least one performance metric on the client device with the
2 browser monitoring function without using the browser monitoring function to request any Web page
3 from any other site; and

4 (e) if a correlated performance metric is to be determined:

5 (i) determining a server performance metric; and

6 (ii) combining the server performance metric with said at least one
7 performance metric to determine the correlated performance metric.

8 22. (Original) The method of Claim 21, further comprising the step of transmitting said at
9 least one performance metric from the client device to a remote site over the network.

10 23. (Original) The method of Claim 22, wherein the remote site comprises a data center,
11 further comprising the step of analyzing said at least one performance metric to determine
12 performance data for the Web page, including the correlated performance metric.

13 24. (Currently Amended) The method of ~~Claim 22~~ Claim 23, further comprising the step of
14 enabling a determination to be made of whether said at least one performance metric will be accepted
15 for processing by the data center, based upon a probabilistic sampling parameter.

16 25. (Original) The method of Claim 24, wherein the probabilistic sampling parameter is
17 applied on a per-user basis to determine if said at least one performance metric will be accepted by
18 the data center.

19 26. (Original) The method of Claim 24, wherein the probabilistic sampling parameter is
20 applied on a per-Web page basis to determine if said at least one performance metric will be accepted
21 by the data center.

22 27. (Currently Amended) The method of ~~Claim 22~~ Claim 23, wherein a plurality of different
23 kinds of performance metrics can be determined by the browser monitoring function, further
24 comprising the step of enabling the data center to selectively accept a performance metric as a
25 function of the kind of performance metric being transmitted to the data center.

26 28. (Original) The method of Claim 21, wherein the step of determining said at least one
27 performance metric is done without the client device providing any indication to the user of the client
28 device that said at least one performance metric is being determined.

29 29. (Original) The method of Claim 21, wherein when determining said at least one
30 performance metric, the client device determines one or more of:

1 (a) a fetch latency, corresponding to a time period required to fetch a base Web
2 page document from a server over the network;

3 (b) a render latency, corresponding to a time period required to fetch and display
4 all contents referenced within an Hypertext Markup Language (HTML) document on the client
5 device;

6 (c) a dwell latency, corresponding to a time period exhibited by the user viewing
7 the Web page, before navigating to a different Web page with the browser program;

8 (d) a per-image fetch latency, corresponding to a time period for fetching a
9 specific image referenced in the Web page;

10 (e) an image arrival time, corresponding to a time at which a specific image,
11 loaded as a part of rendering the Web page, arrives on the browser;

12 (f) a navigation status, corresponding to an event that brought the user to the Web
13 page;

14 (g) a cache status, corresponding to a determination of whether the Web page was
15 cached by the browser program or by a proxy;

16 (h) a window resize event, corresponding to a determination of whether the user
17 resized a window in which the Web page is rendered;

18 (i) a page stop event, corresponding to a determination of whether the user
19 aborted loading of the Web page;

20 (j) an image error event, corresponding to a determination of whether an error
21 occurred while loading an image included in the Web page; and

22 (k) a JavaScript error event, corresponding to a determination of whether an error
23 occurred during interpretation of JavaScript included in the Web page.

24 30. (Original) The method of Claim 21, further comprising the step of determining whether
25 the Web page was previously cached by the client device.

26 31. (Original) The method of Claim 21, wherein said at least one performance metric
27 comprises a performance metric for each image included in the Web page.

28 32. (Original) The method of Claim 21, further comprising the steps of:

29 (a) including a monitor cookie with the Web page that is transferred to the client
30 device from the server device and indicates that the Web page is a monitored document;

1 (b) detecting the monitor cookie when the Web page is transferred to the client
2 device; and

3 (c) causing the browser monitor function to determine that said at least one
4 performance metric is to be determined for the Web page in response to the monitor cookie being
5 detected.

6 33. (Original) The method of Claim 21, further comprising the steps of:

7 (a) executing a server monitoring function on a server device that is transferring
8 the Web page to the client device;

9 (b) determining the server performance metric related to the transfer of the Web
10 page to the client device from the server device with the server monitoring function; and

11 (c) transmitting said server performance metric to a remote site for combination
12 with said at least one performance metric determined by the browser monitoring function on the
13 client device, to determine the correlated performance of the network.

14 34. (Original) The method of Claim 21, wherein the step of combining said at least one
15 performance metric determined by the browser monitoring function with the server performance
16 metric determined by the server monitoring function determine a network latency.

17 35. (Currently Amended) A memory medium on which are stored machine readable
18 instructions, which when executed by a client computing device, cause the client computing device to
19 carryout a browser monitoring function, said browser monitoring function being implemented
20 without requiring any affirmative action by a user of the client computing device and being used for
21 determining at least one performance metric on the client computing device with the browser
22 monitoring function, said at least one performance metric being related to access of a Web page by a
23 browser program executed on the client computing device and enabling at least one of a compound
24 performance metric and a correlated performance metric to be determined without using the browser
25 monitoring function to request any Web page from any other site.

26 36. (Original) The memory medium of Claim 35, wherein the machine readable instructions
27 cause said at least one performance metric to be transmitted to a remote site over a network for
28 determination of the correlated performance metric.

1 37. (Original) The memory medium of Claim 35, wherein said at least one performance
2 metric is determined without the client device providing any indication to a user of the client device
3 that said at least one performance metric is being determined.

4 38. (Original) The memory medium of Claim 35, wherein the machine readable instructions
5 determine one or more of the following performance metrics:

6 (a) a fetch latency, corresponding to a time period required to fetch a base Web
7 page document from a server over the network;

8 (b) a render latency, corresponding to a time period required to fetch and display
9 all contents referenced within an HTML document on the client device;

10 (c) a dwell latency, corresponding to a time period exhibited by the user viewing
11 the Web page, before navigating to a different Web page with the browser program;

12 (d) a per-image fetch latency, corresponding to a time period for fetching a
13 specific image referenced in the Web page;

14 (e) an image arrival time, corresponding to a time at which a specific image,
15 loaded as a part of rendering the Web page, arrives on the browser;

16 (f) a navigation status, corresponding to an event that brought the user to the Web
17 page;

18 (g) a cache status, corresponding to a determination of whether the Web page was
19 cached by the browser program or by a proxy;

20 (h) a window resize event, corresponding to a determination of whether the user
21 resized a window in which the Web page is rendered;

22 (i) a page stop event, corresponding to a determination of whether the user
23 aborted loading of the Web page;

24 (j) an image error event, corresponding to a determination of whether an error
25 occurred while loading an image included in the Web page; and

26 (k) a JavaScript error event, corresponding to a determination of whether an error
27 occurred during interpretation of JavaScript included in the Web page.

28 39. (Original) The memory medium of Claim 35, wherein the machine readable instructions
29 cause the client computing device to determine whether the Web page was previously cached by the
30 client computing device.

1 40. (Original) The memory medium of Claim 35, wherein said at least one performance
2 metric includes a performance metric for each image in the Web page.

3 41. (Original) The memory medium of Claim 35, wherein the machine readable instructions
4 cause the client computing device to:

5 (a) detect whether a monitor cookie is included with the Web page that is
6 transferred to the client computing device, said monitor cookie indicating that the Web page is a
7 monitored document; and

8 (b) cause the browser monitor function to determine that said at least one
9 performance metric is to be determined for the Web page in response to the monitor cookie being
10 detected.

11 42. (Original) A system for determining and collecting at least one performance metric
12 related to access of a Web page by a browser program, comprising:

13 (a) a memory;

14 (b) a display;

15 (c) a network interface; and

16 (d) a processing device that is coupled to the memory, the display, and the network
17 interface, said network interface being adapted to couple to a remote storage at a server to retrieve the
18 Web page, said Web page including machine instructions that perform a browser monitoring function
19 and which are executed by the processing device when the Web page is loaded by the processing
20 device for rendering in the display, said browser monitoring function determining said at least one
21 performance metric and being implemented without requiring any affirmative action by a user of the
22 processing device and without using the browser monitoring function to request any Web page from
23 any other site, said at least one performance metric including at least one of compound performance
24 metric and a correlated performance metric.

25 43. (Original) The system of Claim 42, wherein the machine instructions further cause the
26 processing device to transmit said at least one performance metric from the processing device to a
27 remote site over a network through the network interface.

28 44. (Original) The system of Claim 43, further comprising a computing device disposed
29 remotely at a data center, said computing device receiving and analyzing said at least one
30

1 performance metric to determine performance data for the Web page, said performance data
2 including the correlated performance metric for the network.

3 45. (Original) The system of Claim 44, wherein a determination of whether said at least one
4 performance metric will be accepted for processing by the data center is based upon a probabilistic
5 sampling parameter, ensuring that performance metrics transmitted to the data center are randomly
6 sampled.

7 46. (Original) The system of Claim 45, wherein the probabilistic sampling parameter is
8 applied on a per-user basis to determine if said at least one performance metric is accepted for
9 processing by the data center.

10 47. (Original) The system of Claim 45, wherein the probabilistic sampling parameter is
11 applied on a per-Web page basis to determine if said at least one performance metric will be accepted
12 for processing by the data center.

13 48. (Original) The system of Claim 44, wherein a plurality of different kinds of performance
14 metrics can be determined by the browser monitoring function, and wherein the data center
15 selectively accepts said at least one performance metric, based upon a specific kind of performance
16 metric that is being transmitted to it for processing.

17 49. (Original) The system of Claim 42, wherein said at least one performance metric is
18 determined by the processing device without providing any indication to a user of the processing
19 device that said at least one performance metric is being determined.

20 50. (Original) The system of Claim 42, wherein said at least one performance metric
21 includes one or more of:

22 (a) a fetch latency, corresponding to a time period required to fetch a base Web
23 page document over the network;

24 (b) a render latency, corresponding to a time period required to fetch and render all
25 contents of the Web page on the display;

26 (c) a dwell latency, corresponding to a time period exhibited by a user viewing the
27 Web page, before navigating to a different Web page;

28 (d) a per-image fetch latency, corresponding to a time period for fetching a
29 specific image referenced in the Web page;
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1 (e) an image arrival time, corresponding to a time at which a specific image,
2 loaded as a part of rendering the Web page, arrives for rendering on the display;

3 (f) a navigation status, corresponding to an event that brought a user to the Web
4 page;

5 (g) a cache status, corresponding to a determination of whether the Web page was
6 cached in the memory by a browser program or by a proxy;

7 (h) a window resize event, corresponding to a determination of whether a user
8 resized a window in which the Web page is rendered on the display;

9 (i) a page stop event, corresponding to a determination of whether a user aborted
10 loading of the Web page;

11 (j) an image error event, corresponding to a determination of whether an error
12 occurred while loading an image included in the Web page; and

13 (k) a JavaScript error event, corresponding to a determination of whether an error
14 occurred during interpretation of JavaScript included in the Web page.

15 51. (Original) The system of Claim 42, wherein the machine instructions further cause the
16 processing device to determine if the Web page was previously cached in the memory by the
17 processing device, before determining said at least one performance metric.

18 52. (Original) The system of Claim 42, wherein said at least one performance metric
19 comprises a performance metric for each image included in the Web page.

20 53. (Original) The system of Claim 42, wherein the machine instructions further cause the
21 processing device to:

22 (a) detect whether a monitor cookie is included with the Web page, said monitor
23 cookie indicating that the Web page is a monitored document; and

24 (b) cause the processing device to determine that said at least one performance
25 metric is to be determined for the Web page in response to the monitor cookie being detected.

26 54. (Original) The system of Claim 44, further comprising:

27 (a) a server computing device that is remote from the processing device and
28 coupled in communication with the processing device and with the data center over a network
29 through the network interface, said server computing device executing a server monitoring function
30 in regard to transferring the Web page to the processing device over the network;

1 (b) said server computing device determining a server performance metric related
2 to the transfer of the Web page to the processing device from the server computing device; and

3 (c) said server computing device transmitting said server performance metric to
4 the data center site for processing.

5 55. (Original) The system of Claim 54, wherein the data center combines a performance
6 metric determined by the browser monitoring function executed by the processing device with the
7 server performance metric determined by the server computing function to determine the correlated
8 performance metric.

9 56. (Original) The system of Claim 54, further comprising a caching proxy disposed between
10 the server computing device and the processing device, said caching proxy executing a caching proxy
11 monitoring function that determines at least one performance metric related to a performance of the
12 caching proxy.

13 57 – 61 (Cancelled.)
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